DOCUMENT RESUME

ED 298 749 EC 210 785

TITLE What the Research Shows: New Horizons for Supported Employment.
INSTITUTION Virginia Commonwealth Univ., Richmond. Rehabilitation Research and Training Center.
PUB DATE Feb 88
NOTE 10p.
AVAILABLE FROM Rehabilitation Research and Training Center, Virginia Commonwealth University, 1314 West Main St., Box 2011, Richmond, VA 23284-2011.
PUB TYPE Collected Works - Serials (022) -- Reports - Research/Technical (143) -- Statistical Data (110)
JOURNAL CIT RRTC; v4 n2 Feb 1988

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Cost Effectiveness; *Employer Attitudes; Employer Employee Relationship; Employers; Employment Opportunities; *Employment Programs; Job Development; *Job Performance; Management Information Systems; *Mental Retardation; *Personnel Evaluation; Vocational Rehabilitation
IDENTIFIERS Severity (of Handicap); *Supported Competitive Employment; Virginia

ABSTRACT

This newsletter issue outlines the growth of the supported employment movement for individuals with mental retardation. Two research studies are described, dealing with employers' experiences with supported employment. The first study examined the initial and most recent or terminal evaluation forms of 125 workers with mental retardation. The study found that the workers' level of mental retardation did not affect how their employers evaluated their work performance. When compared to initial evaluations, the terminal evaluations showed poorer performance in communication, attending to task consistently, and general performance (i.e., comparable to nonhandicappped workers). A second study found that 483 Virginia employers of the mentally retarded were most satisfied with workers' attendance and punctuality and least satisfied with speed of work, ability to learn new skills, and degree of supervision required. In addition to the research summaries, an article describes the Rehabilitation Research and Training Center's management information system which stores, retrieves, and manipulates data about supported employment program participants. A series of benefit-cost analyses on 214 people placed into supported competitive employment is examined from both the taxpayer's and the program participant's perspectiva. The newsletter concludes with a general description of the Center's purpose and activities and statistical data on individuals the Center has placed into supported employment. (JDD)

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What the Research Shows:

New Horizons for Supported Employment

RRTC
Volume 4, Number 2

February 1988

Rehabilitation Research and Training Center

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VOLUME 4, NUMBER 2

RRTC

"Improving the Employability of Citizens Who Are Mentally Retarded"

REHABILITATION RESEARCH AND TRAINING CENTER AT VIRGINIA COMMONWEALTH UNIVERSITY

What the Research Shows: New Horizons for Supported Employment

The speed with which supported employment has grown from a few widely scattered demonstration programs into a nationwide movement has surprised even the most optimistic advocates. What was once an unproven belief—that individuals with significant mental retardation can perform meaningful work in real jobs and contribute to their economic self-sufficiency—is now becoming a reality for thousands of citizens with disabilities. Today, supported employment programs are operating in literally hundreds of local communities. In fact, supported employment is becoming nationally recognized as the preferred employment alternative for persons with severe disabilities, while activity centers are increasingly viewed as inappropriate options.

These events have significantly affected the types of research activities being conducted in the area of supported employment. Where we previously focused on the question, Is supported employment possible?, we are now concentrating on many new issues: How can supported employment programs operate most effectively and efficiently? When are employers most likely to hire a worker with mental retardation? How do employers rate the performance of workers employed through supported employment programs? Answers to these questions will enable us to market our programs more effectively and to respond to concerns most frequently raised by employers.

Another key issue, which is vital to administrators attempting to design and implement supported employment programs, focuses on the activities of employment specialists. How much time must a job coach spend with an individual consumer to guarantee his or her long-term success in a competitive job? How many individuals can a single job coach place in a year and how many job coaches should be employed in a specific program?

Also, as the number of supported employment programs grows and the amount of public funds invested in supported employment accelerates, issues regarding program evaluation and program costs become increasingly important. Are supported employment programs having their intended effect? Are consumers really better off after leaving sheltered environments for competitive employment situations? How do the costs of supported employment programs compare to the costs of alternative vocational programs? The long-term future of the supported employment movement hinges on the answers to these questions.

The Rehabilitation Research and Training Center has recently completed a number of activities in which these and other issues were investigated in order to assist local and state programs in implementing supported employment activities. This newsletter reports on research of critical importance to individuals facing the opportunities and challenges of the supported employment movement.

Research on Employers in Supported Employment

The success of supported employment is dependent upon the cooperation of a number of different people: workers, employment specialists, parents, and employers, who play one of the most critical roles in the supported employment process. Until now, we have known very little about what employers think about supported employment, and how satisfied they are with this service or with the workers they employ. Recently, the RRTC completed the following two studies that shed some light on employers' experiences with supported employment and supported employment workers.

EMPLOYERS' EVALUATIONS OF SUPPORTED EMPLOYMENT WORKERS

The Purpose of This Study

This study assessed the validity of the *Supervisor's Evaluation Form* that is used by employment specialists during the follow-along phase of supported competitive employment.

Who Was Studied?

125 workers were sampled from the entire population of workers with mental retardation that the RRTC has provided with supported competitive employment services.

What Was Studied?

Employer evaluations of each worker were included only if they had an initial and terminal (or most recent for those workers employed) evaluation that met established selection criteria. An initial evaluation had to be dated within the first 60 days that a worker was employed. A terminal (or most recent) evaluation had to be dated within the last 6 months that the worker was employed (if the worker lost his/her job) OR within the 6 months immediately before we conducted the statistical analyses (if the worker was still employed).

The Research Questions

1) What is the relationship between the level of functioning of workers and the evaluations that they receive from their employers?
2) Are there specific aspects of work performance that workers exhibit early in the placement process that will correlate with whether they remain employed or lose their jobs?
3) Do workers who lose their jobs get lower evaluations than workers who stay employed?

The Research Design

A 2x4x2 level design was used. There were two levels of the time of the evaluation (initial and terminal), four levels of workers' intellectual functioning (mild, moderate, severe, and profound), and two levels of employment status (employed and separated). We used two types of statistical analyses. First, we used repeated measures multivariate analyses of variance (MANOVA) for each item on the evaluation form. These analyses helped us to identify changes in employers' evaluations over time from the first to the last evaluation. Second, we used univariate analyses of variance (ANOVA) to help us identify the main effects that workers' level of functioning and employment status had upon their evaluations.

The Major Findings

1) The level of mental retardation displayed by these workers did not affect how their employers evaluated their work performance. In fact, workers who were described as lower functioning generally showed improvement in their employer evaluations as compared to the evaluations of workers described as higher functioning.
2) Employers' evaluations of workers' attendance, break behavior, and overall competence initially following placement correlated significantly with employment status. Workers who would subsequently lose their jobs received significantly lower employer evaluations of these items as compared to other workers who remained employed.
3) Comparison of initial and terminal evaluations showed that workers who lost their jobs received poorer evaluations over time for their attendance and consistency in task performance.
4) Comparison of initial and terminal evaluations for all workers revealed that workers in general showed poorer terminal evaluations for their communication, attending to task consistently, and performing comparable to nonhandicapped workers, when compared to their initial evaluations.

The Implications of This Study

Receiving written evaluations from employers is an important aspect of follow-along services. This study supports the importance of these evaluations by demonstrating the validity of an evaluation form. Results suggest that employment specialists must pay particular attention to workers' attendance and break behavior, especially during the first weeks of placement since these aspects of work performance affect the employment status of the workers, as demonstrated in this study. In addition, the study revealed the important role that employment specialists play in stabilizing workers on their jobs. When initial and terminal evaluations were compared, workers in general received better initial evaluations for their communication skills, attending to task consistently and performing comparable to other workers. This result clearly indicated the positive effect that the presence, training, and support of employment specialists has upon employers' initial perceptions of their workers.

For More Information:

Shafer, M.A., Kregel, J., Banks, D.B., and Hill, M.L. (in press). What does the boss think? An analysis of employer evaluations. *Research in Developmental Disabilities.*

SURVEY OF EMPLOYERS OF WORKERS WITH MENTAL RETARDATION

The Purpose of This Study

This study was designed to assess employers' experiences with workers with mental retardation and to determine the viability of supported competitive employment services.

Who Was Surveyed?

483 employers in Virginia were surveyed. These employers were divided into three samples:

- 137 employers had employed workers receiving supported competitive employment services.
- 166 employers had employed workers receiving traditional job placement services from the state vocational rehabilitation agency.
- 180 employers were randomly surveyed without first being identified as employers of workers with mental retardation; 27 subsequently reported that they had hired workers.

The Research Questions

1) What are the major incentives and barriers that employers identify as affecting their decisions to hire workers with mental retardation?

2) How do workers evaluate the performance of these workers?

3) How receptive are employers to the idea of using supported competitive employment services in their business?

Major Barriers to Hiring

Of those employers indicating that they did not employ a worker with mental retardation, the lack of applicants was the most frequently cited reason; all other factors were infrequently identified.

Reasons for Hiring Employees Who Are Mentally Retarded

TYPE OF EMPLOYER			
Supported Employment	*Job Placement*	*Other*	
86%	67%	57%	Deserve the Opportunity
59%	51%	57%	Position Opening
64%	26%	14%	Promised follow-along support
48%	21%	10%	Presentation of service representative
70%	49%	29%	Assured job completion
32%	12%	10%	Public relations
7%	0%	0%	Affirmative action

Major Incentives

1) Employers consistently identified the belief that people with mental retardation deserve an opportunity to work as the major reason that they had hired these workers.

2) An opening in their company was the second most frequently cited reason for hiring workers with mental retardation.

3) Employers of workers receiving supported competitive employment services more frequently identified the promise of follow-along contact, the presentation of the employment specialist, and assurances that the worker could complete the job as affecting their hiring decisions. These results are indicated below.

Performance Evaluation

1) Employers were most satisfied with the attendance and punctuality of their workers.

2) Employers were least satisfied with the speed of work, the ability to learn new skills, and the degree of supervision required.

3) The performance of workers receiving supported competitive employment services was consistently evaluated to be better than the performance of workers receiving job placement services or no services.

What Are the Implications of This Study?

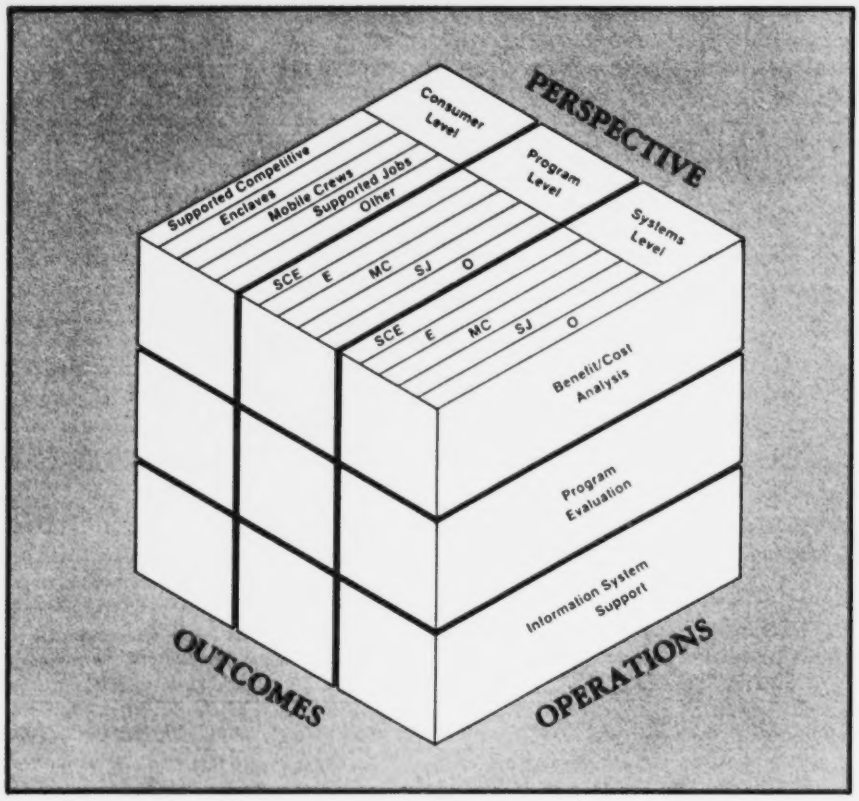
1) Employment opportunities for workers with mental retardation are available and waiting. The results of this study suggest that the major reason that more jobs have not been secured for these workers is because we have not been trying hard enough. Overwhelmingly, employers indicated that they are interested in using supported competitive employment services. Over 80% of the employers surveyed who had not previously hired a worker with mental retardation said that the reason that they hadn't hired was because none had applied.

2) Marketing strategies should emphasize the attendance and punctuality of workers with disabilities. Employers in this survey were most satisfied with these aspects of their workers.

3) Marketing strategies should also emphasize the follow-along services of supported competitive employment, a factor frequently cited by employers as a major reason for hiring workers with mental retardation.

For More Information:

Shafer, M.S., Hill, J., Seyfarth, J., and Wehman, P. (in press). Competitive Employment and Workers with Mental Retardation: An analysis of employers' perceptions and experiences. *American Journal of Mental Deficiency.*



RRTC's Supported Employment Management Information System

How do you know if your supported employment program is successful? Is funding a problem for your program? Is information important in answering these and all the other questions that are asked of you?

If you answered *YES* to any of these questions, then you know the value of data and the importance of a responsive Management Information System (MIS).

At the heart of the RRTC's Management Information System is a core set of data forms. These forms (Consumer Information Referral, Consumer Employment Screening, Job Screening, Placement, Consumer Update, Job Update, Separation, Discharge, Direct Service Monthly Report, Supervisor Evaluation, Consumer Specific Intervention Time, Group Intervention Time, and a Group Membership Form) are completed on a routine schedule, which can be varied to meet individual program needs.

The information on these forms provides a complete picture of consumers placed in supported employment that includes wages, integration, severity level, fringe benefits, residential situations, hours of intervention, hours and length of employment as well as other measures of program efficiency. Knowing the specific program and consumer data enable program management and funding sources to establish benchmarks and predict accurate benefits/costs for startup programs as well as ongoing programs.

"Everytime the RRTC submits requests for funding, regardless of whether it is federal or state dollars, our MIS has had a significant positive impact," says Mark Hill, Director of Information Systems at the RRTC. "Our system has tremendous power in tracking consumer outcomes and establishing program effectiveness, enabling us to answer legislators and others when asked about our program costs and consumer outcomes."

The RRTC's consumer driven system is based on individual consumers and is keyed on consumers' social security numbers. A consumer driven system enables the RRTC to track consumers across different geographic locations and programs and yet can be aggregated into state, region, or program reports. Employment and community outcome information is also part of the system.

The Commonwealth of Virginia with assistance from OSERS has just completed the first phase of statewide implementation and within the next six months all supported employment programs that receive funding from Virginia's Department of Rehabilitative Services and Department of Mental Health, Mental Retardation, and Substance Abuse will be reporting information on the RRTC's standard set of forms.

"Our aim is to provide an effective, user-friendly system that includes ongoing support and training."

North Dakota has also contracted with the RRTC to evaluate their statewide supported employment program. Additionally, transitional school programs in California and Florida are also using the RRTC's MIS. As programs send in their completed forms, data will be entered into the center's mainframe. Data is checked and analyzed by the center's statistician as well as through quality checks. Quarterly reports are generated that provide a summary for the individual program as well as statewide information. User feedback enables us to improve our reports by focusing on exactly what individual programs want to know. Aggregate state information is interpreted and examined for trends in the data. As shown on the accompanying cube, information is reported on three perspectives: consumer, system, and program. For example, benefit/cost analyses can be performed on either consumer, program, or system level data for any type of program, e.g., supported competitive employment, enclave, mobile crews, supported jobs, or other. Using this cube as a matrix of information reports, you can see the flexibility of the data and the power it provides to programs using the RRTC's MIS.

"The RRTC's data management system will be the first intra-state system which allows compatibility on individualized data," says Hill.

Future plans for the MIS include incorporating enhancements into a software package developed for IBM compatible microcomputers, which offers an export routine for uploading to a mainframe computer. An IBM compatible system would give local control of data to the individual programs, while still ensuring data compatibility.

Any program can use the RRTC's MIS by simply implementing our set of forms and analyzing data in a similar manner. The RRTC's forms are published in the *Data Management System: Data Operations Manual*, which is available from the RRTC.

The $$$$$ and Sense of Benefit-Cost Analyses

Are persons with severe disabilities financially better off as a result of their participation in supported employment programs? Do our nation's taxpayers benefit by converting large numbers of existing adult day programs into supported employment alternatives? The process used by researchers and economists to answer questions like these is referred to as benefit-cost analysis.

Over an eight-year period of time (1978-1986), the RRTC has completed a series of benefit-cost analyses on a group of 214 people placed into supported competitive employment. All individuals earned at least the federal minimum hourly wage. Approximately 70% of all individuals placed into jobs remained for at least six months. The average length of time that each person was employed during the study period was 21 months.

Benefit-cost analyses were completed from the perspective of both the consumer and the taxpayer. The general procedure for conducting a benefit-cost analysis involves first totaling the financial benefits of a program, then subtracting the total costs of the program.

The results of the analyses show that supported competitive employment significantly benefits both individual consumers and taxpayers. Specific consumer benefits for the competitively employed include increased net income and fringe benefits. Benefits to the taxpayer result from increased tax revenue generated by the working consumers, decreased dependence on government financial assistance such as SSI, and a large decrease in the costs of providing traditional alternative programs such as sheltered workshop or day activities. Following are the major findings of the study:

$ Consumers benefit financially by choosing to participate in the supported employment program rather than remaining in their previous service program. For every dollar of net income a consumer had before supported employment, he or she now receives an average of $1.68. This is very important because even though consumers may lose all or a part of their government support (SSI) payment, they still benefit financially after choosing to participate in supported employment.

$ Not only is it true that the consumers benefit financially as a group from supported employment, but analysis showed that each consumer also benefits individually. In fact, of the 214 individuals in the study, 100% were better off financially after participating in supported employment. This indicates that the financial risks for consumers participating in supported employment may not be as large as some critics have indicated.

$ Over the eight-year period of time that the program has been in operation, over $1.5 million dollars have been spent on supported employment services. However, this investment has resulted in overall net savings to taxpayers of 2.5 million when the costs of supported employment are compared to the costs of government financial assistance and traditional adult vocational services.

$ While the savings resulting from supported employment are substantial, they do not occur immediately. For example, in 1979, the first year of the program, taxpayers actually lost 81 cents for each tax dollar invested. It was not until the third year of the program that the project resulted in a net savings to the taxpayer. By 1986, taxpayers had actually gained $1.68 for each dollar invested in the program, and the total gain will continue to increase in the coming years as consumers remain in their jobs longer periods of time.

Taxpayer Benefit Cost Analysis

Year Ending June of	Consumers Served	Taxes Paid	+ SSI Reduction	+ Alternate Program Cost	/ TJTC Cost	+ Project Expenses	= Taxpayer B/C Index
1979	16	$10,408	$0.00	$33,578	$0.00	$230,391	0.19
1980	**41**	**53,468**	**7,482**	**145,428**	**21,679**	**239,013**	**0.79**
1981	59	73,630	45,070	202,578	36,485	209,708	1.30
1982	**72**	**76,314**	**55,887**	**244,730**	**35,867**	**194,170**	**1.64**
1983	86	88,807	72,557	280,349	58,135	182,652	1.83
1984	**99**	**104,215**	**100,770**	**339,340**	**43,907**	**174,572**	**2.49**
1985	104	96,027	113,409	344,415	49,149	137,384	2.97
1986**	**112**	**88,408**	**107,628**	**332,388**	**52,873**	**127,271**	**2.93**
Cumulative Total	214	$591,278	$502,804	$1,922,806	$298,096	$1,495,162	1.68

**Inflation Corrected to 86-1 Discount Rate = 5%*

*** Based on only 10 of 12 months*

Facts about Intervention Time

Intervention time is any time spent by an employment specialist or job coach in activities that are designed to enable a specific consumer to obtain, learn, perform or maintain a job. According to research at the RRTC, intervention time can be reported most accurately using the following categories:

- **Intervention Time Directly Related to Job Skills Training**
  1) Active (consumer and job coach at job site).
  2) Inactive Time (between periods of active intervention).
- **Intervention Time Indirectly Related to Job Skills Training**
  1) Travel/Transporting
  2) Consumer Training
  3) Program Development
  4) Direct Employment Advocacy
  5) Indirect Employment Advocacy
  6) Screening and Evaluation

Here are other significant RRTC facts and findings about intervention time.

Fact: Intervention time encompasses a broad range of work-related activities including direct training, job-site observation, travel to and from a job-site, work-related skill training (e.g., money handling, transportation, grooming, etc.), development of instructional programs, communication with parents and agency representatives, or advocacy on behalf of the consumer with job-site personnel or in finding a job for a particular consumer.

Fact: Only persons performing the duties of an employment specialist or job coach can accumulate intervention time.

Fact: Employment specialists need to account for intervention time on a *daily* basis to ensure accuracy.

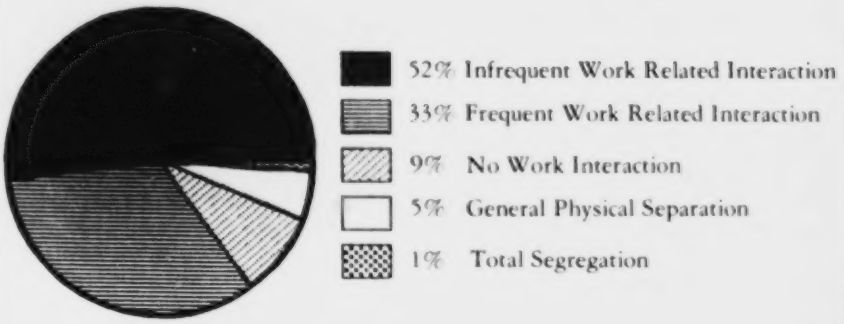
Fact: Intervention time across IQ levels may be similar partly because of appropriate job matching techniques which look for jobs that maximize an individual's present skills and strengths.

Fact: The greatest amount of intervention time is reported during the first four weeks of employment.

Fact: These averages are based on an average work week of 29 hours. A longer or shorter work week would directly affect mean intervention hours.

Fact: An employment specialist will often exceed the number of hours a consumer works per week during the beginning of employment because of transportation, training, communication with family members, or other factors in addition to full-time job-site coverage.

LEVEL OF CONSUMER INTERACTION IN WORKPLACE


52% Infrequent Work Related Interaction
33% Frequent Work Related Interaction
9% No Work Interaction
5% General Physical Separation
1% Total Segregation

The data in this chart indicates that 33% of consumers placed into supported employment in the Commonwealth of Virginia have frequent work related interaction with either nondisabled coworkers or customers. Another 52% have infrequent work related interaction, but are still integrated on the job. Socialization with nondisabled coworkers is one of the primary benefits of supported employment. The opportunity for consumers to develop skills at work, along with peer modeling, makes supported employment a dynamic force in the lives of individuals with severe disabilities.

Fact: During the first year of employment RRTC consumers received an *average* of 161 hours of total intervention time. Note, approximately 50% of consumers require more than this average of 161 hours.

Fact: *Stabilization* is a term that refers to the point in time when initial training is theoretically completed and ongoing support services begin. Stabilization also has very pragmatic administrative implications since in many cases it represents the point where funding responsibilities are transferred from one agency to another.

The concept of stabilization for independent placements that has been utilized by some programs in Virginia states that stabilization occurs when the relative percentage of a consumer's intervention time is less than 20% of the hours he/she worked for 30 days. For this sample, this occurred after 117 hours of intervention. However, in actual practice each local interagency association has defined stabilization in a variety of ways. Generally, the RRTC recommends that each individual case be examined for indications of stabilization. This recommendation helps prevent cut-off levels which may be inappropriate for those individuals who need high levels of intervention, yet also have a real chance for success.

Fact: 117 hours to stabilization and 161 hours of total intervention time are *averages* and *considerable variability exists among individual consumers.*

For more information about intervention time, see Volume II of *Competitive Employment for Persons with Mental Retardation: From Research to Practice* and the article entitled "An Analysis of Employment Specialist Intervention Time in Supported Competitive Employment: 1979-1987" by John Kregel, Mark Hill, and P. David Banks. Available from the RRTC.

Commonly Asked Questions

About two years ago we reported the current statistics on consumers tracked by the RRTC. Since that time we are beginning to follow the progress of all supported employment consumers in Virginia. These are the updated answers to the questions that we are most commonly asked. The data that is presented in these questions and answers still do not include all of the supported employment activities in Virginia. There are some providers in Virginia operating supported employment programs whose efforts are not yet included in the RRTC's data base. This data reports the statistics on consumers being tracked by the RRTC as of October 1, 1987.

Q: How many consumers have been placed into jobs since 1979?
A: 392 individuals have been placed with a total of 549 placements.

Q: How many different companies have hired these individuals?
A: 319 in Richmond and other localities in Virginia.

Q: What is the average age of consumers?
A: 30 is average age and it ranges from 18 to 69.

Q: What types of jobs do consumers perform?
A: 46% Food Service
30% Janitorial
5% Stock Clerk/Warehouse
4% Groundskeeping
4% Clerical/Office Work
4% Industrial
3% Laundry
3% Unskilled Labor
1% Other

Q: What is the general functioning level of employed consumers who have mental retardation as either a primary or secondary disability?
A: 8% Profound and Severe Mental Retardation
47% Moderate Mental Retardation
37% Mild Mental Retardation
8% Borderline Mental Retardation

The following statistics are for those individuals labeled mentally retarded:
Median IQ: 51
Mean IQ: 52
IQ Range: 19 to 82

Note: Many of the individuals included in these statistics have at least one other disability. The Median IQ is the midpoint of the range and indicates that over half the consumers have an IQ of below 51 and half an IQ over 51.

Q: How many consumers have at least one other disability?
A: 184 (47%) consumers have at least one other disability.
The most frequently reported secondary disabilities are:
20% Speech/Language Impairment
8% Convulsive Disorder
8% Visual Impairment
6% Emotional Disorder/Long Term Mental Illness
6% Cerebral Palsy
4% Learning Disability
3% Hearing Impairment
4% Other

Q: What is the retention rate for consumers?
A: 72% of placed consumers remain employed at least six months.

Q: What is the average length of employment for consumers?
A: The average length of employment for consumers in the RRTC population that have received services since 1978 is 21 months. This figure is 13 months for consumers across the Commonwealth of Virginia.

Q: What was the average wage before job placement?
A: Average consumer income prior to placement was reported at $19.21 per month, however 68% of consumers had no earned income in the year prior to referral. The average income for the 32% of consumers who did receive income was $59.83 per month or an annual income of $717.90.

Q: What was the average wage after job placement?
A: Average monthly income after placement in supported employment was $409.83, with an average hourly wage at $3.53. This hourly wage varies from $1.73 per hour for work crews to $4.41 per hour for time limited services.

Q: What is the average number of hours worked per week by consumers?
A: Consumers worked an average of 27 hours per week.

Q: What percentage of employers use the Targeted Jobs Tax Credit?
A: 42% of employers utilize TJTC.

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Rehabilitation Research and Training Center

The mission of the Virginia Commonwealth University Rehabilitation Research and Training Center is to provide research and training related to employment of citizens with severe disabilities. Specifically, the center focuses on providing high-quality and diverse applied research in the area of supported competitive employment. The research conducted at the center is derived from previous and ongoing work with people who are severely disabled/mentally retarded. Center staff anticipate that research and training results will influence employers, professional service providers, parents, and others involved in public policy decisions.

Research and training activities are closely related to the successful and continued job placement, job-site training, and follow-up services provided in conjunction with local rehabilitation agencies, work facilities, and secondary special education programs.

Through these ongoing activities, center staff work with employers, parents, and service providers on a regular basis. A comprehensive system for monitoring the progress and retention of placed clients has been developed.

The center focuses on training rehabilitation counselors, educators, employers, parents, and other mental retardation service providers to gain competitive employment for citizens who are mentally retarded. Training strategies include frequent national dissemination of topical newsletters, monographs, videotapes, and other vehicles for improving skills and attitudes toward workers who have mental retardation. Visitors to the center who wish to learn about the supported work model of competitive employment may participate in internships. As part of the training effort, regular workshops and institutes are also available. For further information, please call 804/257-1851.

Further Information

Inquiries about the VCU Rehabilitation Research and Training Center may be made to Dr. Paul Wehman, director, or Dr. Sherril Moon, associate director. Call 804/257-1851 or write to 1314 West Main Street, Richmond, VA 23284-2011.

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